

# **Federal Fleets and Clean Cities: A Path Forward**

August 21, 2008

**NREL/PR-540-44257**

**Presented at the Clean Cities Webcast held August 21, 2008 online.**

# Agenda

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Federal fleet requirements

Federal fleet compliance

Understanding the challenge

Effective petroleum reduction strategies

# What are Federal agencies required to do?

**Acquire alternative fuel vehicles (AFVs)** as they turn over light-duty fleets (EPAAct 1992)

- Fleets of 20 or more vehicles located in cities
- 75% of acquisitions
- Excludes law enforcement, military tactical, emergency

**Use alternative fuel** in all dual-fuel AFVs (EPAAct 2005)

**Reduce petroleum consumption** by 2% annually through 2015 compared to 2005 (E.O. 13423)

**Increase alternative fuel use** by 10% annually (cumulative basis) compared to 2005 (E.O. 13423)

## **New requirements (EISA 2007, NDAA 2008)**

**Reduce petroleum use and increase alternative fuel use**  
(EISA 142)

- DOE conducting rulemaking
- Rule likely to look like E.O. 13423

**Install renewable fuel pumps** at Federal fleet fueling centers  
(EISA 246)

**Prohibited from acquiring high GHG-emitting vehicles**  
(EISA 141)

**Prohibited from acquiring high GHG-emitting alternative or synthetic fuels** (EISA 526)

May get **EPAct credit for hybrid vehicles** (NDAA)

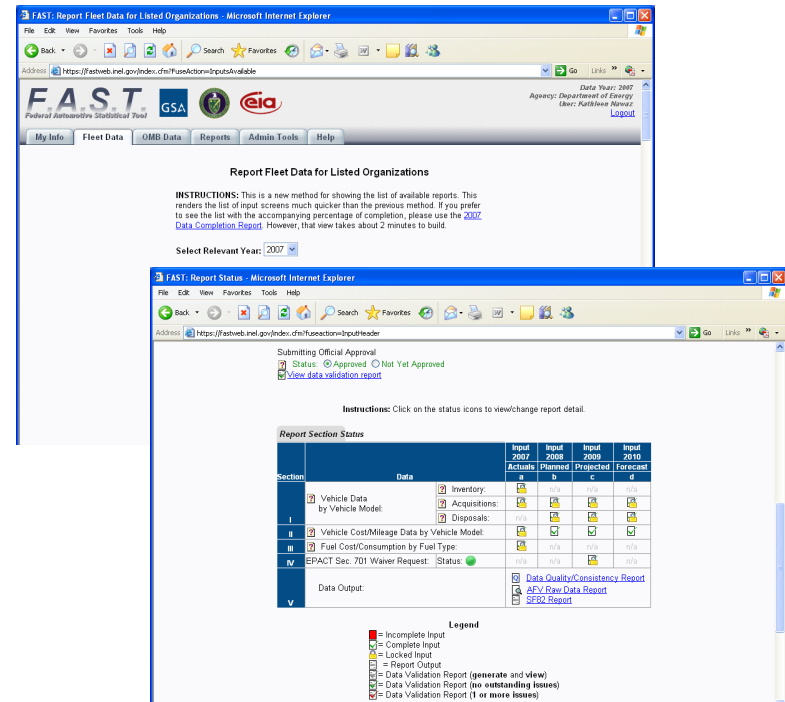
## Who is covered by these requirements?

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- Department of Agriculture
- Department of Commerce
- Department of Defense
- Department of Energy
- Department of Health and Human Services
- Department of Homeland Security
- Department of Housing and Urban Development
- Department of Interior
- Department of Justice
- Department of Labor
- Department of State
- Department of Transportation
- Department of Treasury
- Department of Veteran Affairs
- Court Services and Offender Supervision
- Environmental Protection Agency
- General Services Administration
- National Aeronautics and Space Administration
- Smithsonian
- Social Security Administration
- U.S. Postal Service

# Measuring Agency Compliance

- Vehicles, fuel use, and related data entered after close of fiscal year (FY)
- Data reported to Congress by agency each year
- Basis for OMB transportation scorecards



**FAST: Report Fleet Data for Listed Organizations**

INSTRUCTIONS: This is a new method for showing the list of available reports. This renders the list of input screens much quicker than the previous method. If you prefer to see the list with the accompanying percentage of completion, please use the [2007 Data Completion Report](#). However, that view takes about 2 minutes to build.

Select Relevant Year: 2007

Submitting Official Approval  
Status: ☒ Approved ☐ Not Yet Approved  
[View data validation report](#)

Instructions: Click on the status icons to view/change report detail.

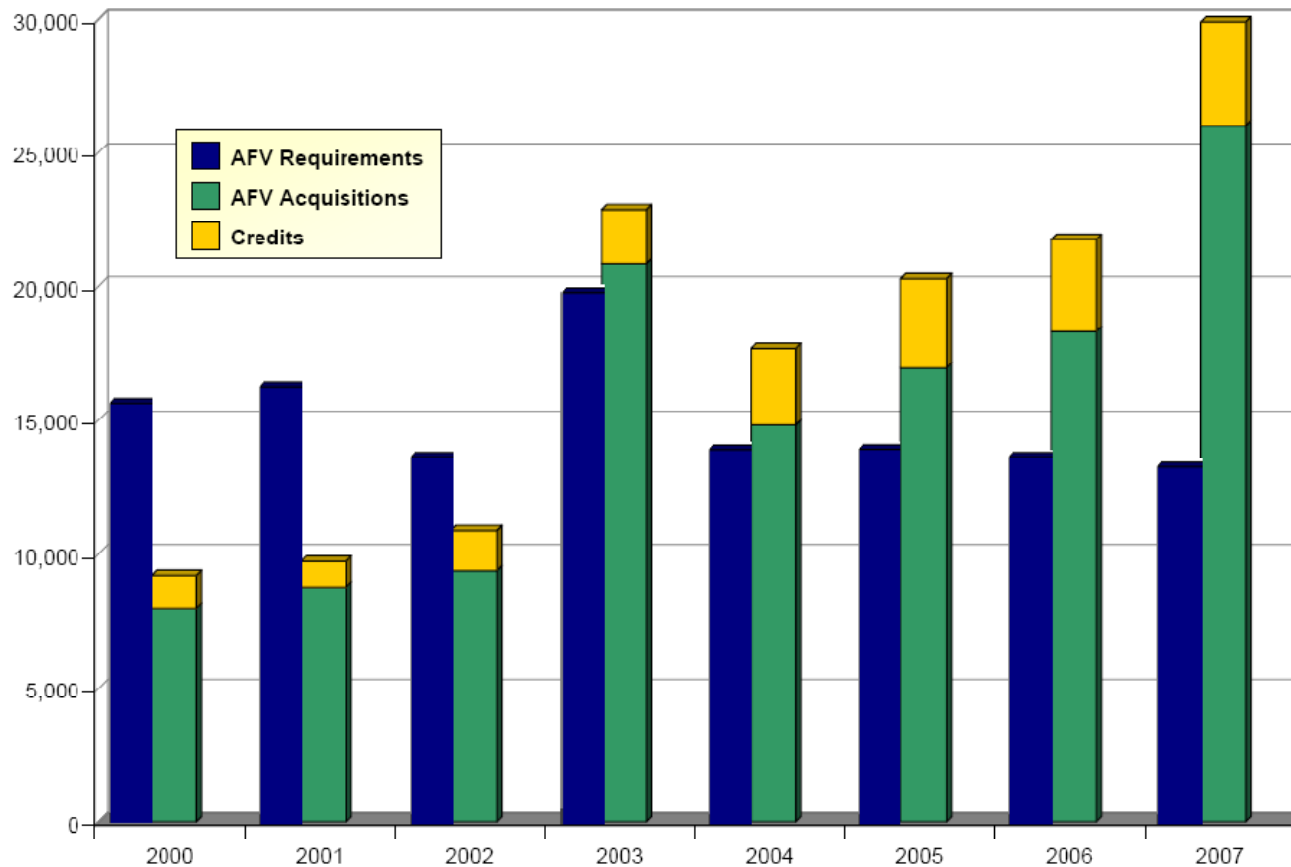
Section	Data	Input 2007	Input 2008	Input 2009	Input 2010
		a	b	c	d
I	Vehicle Data by Vehicle Model				
II	Vehicle Cost/Mileage Data by Vehicle Model				
III	Fuel Cost/Consumption by Fuel Type				
IV	EPACT Sec. 701 Waiver Request				
V	Data Output				

**Legend**

- Incomplete Input
- Complete Input
- Locked Input
- Report Output
- Data Validation Report (generate and view)
- Data Validation Report (no outstanding issues)
- Data Validation Report (1 or more issues)

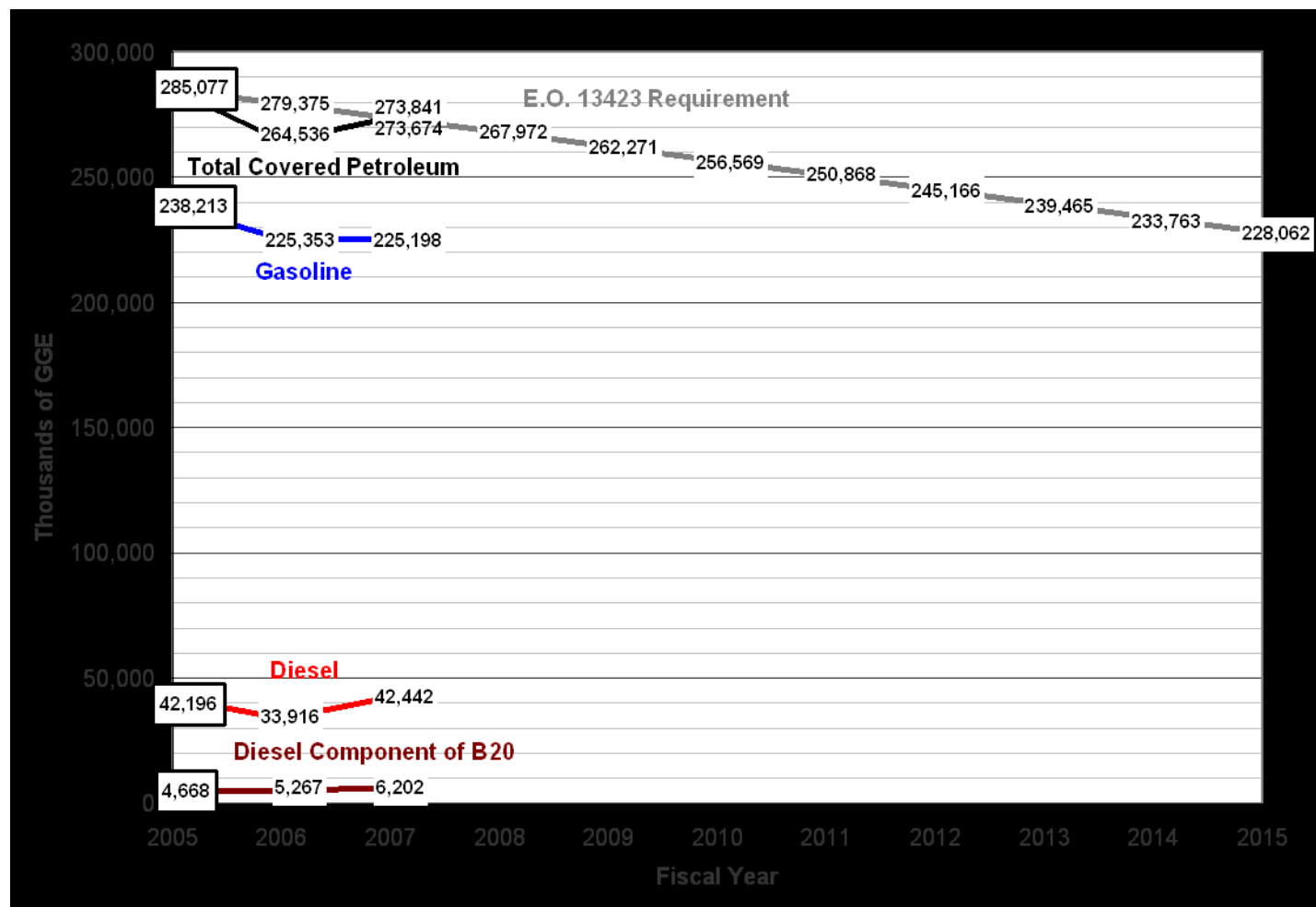
<https://fastweb.inel.gov/>

# Federal Fleet Compliance\*—EPA Act



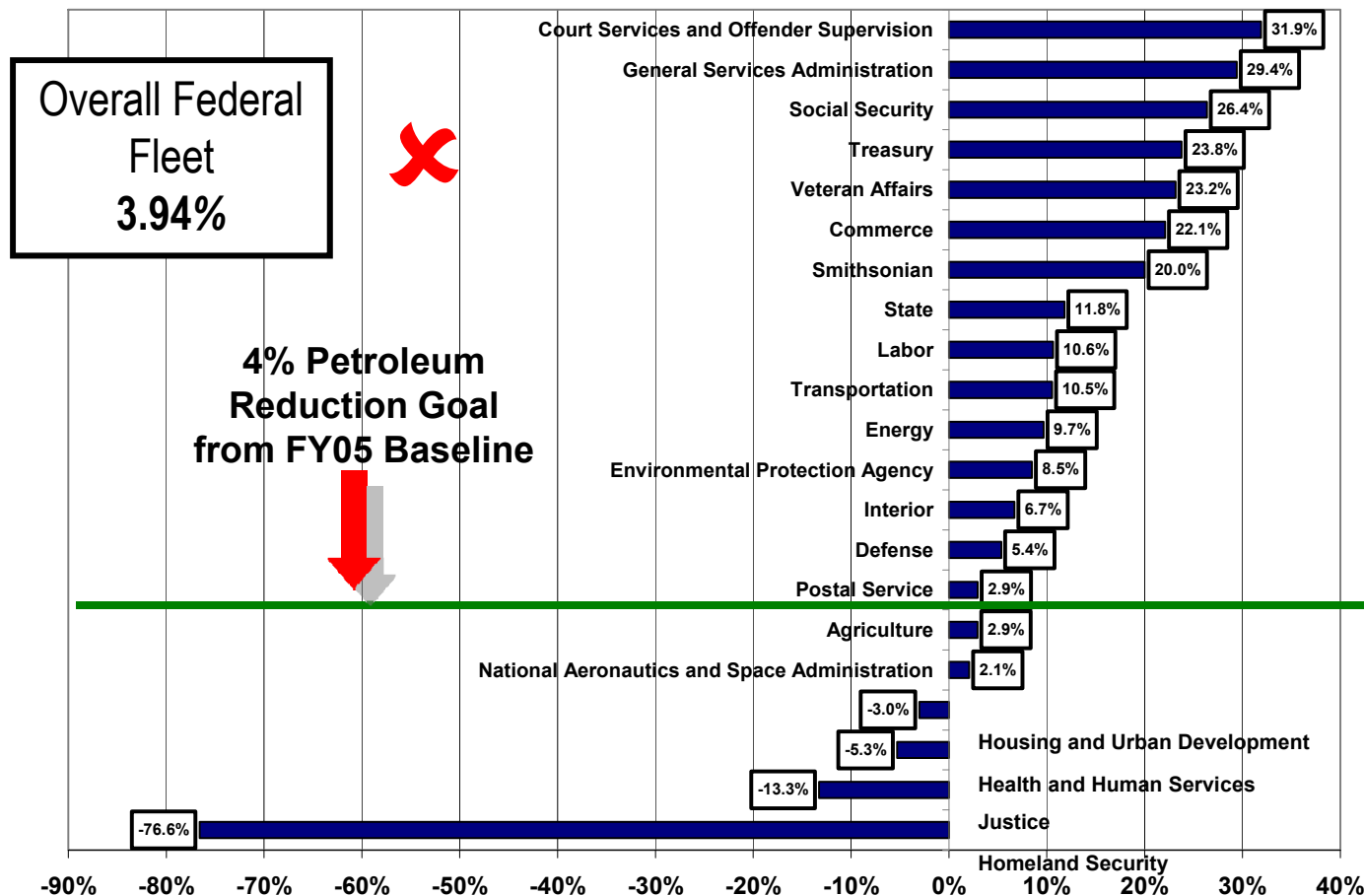
**\*Preliminary data for FY 2007**

# Federal Fleet Petroleum Consumption (FY07)\*



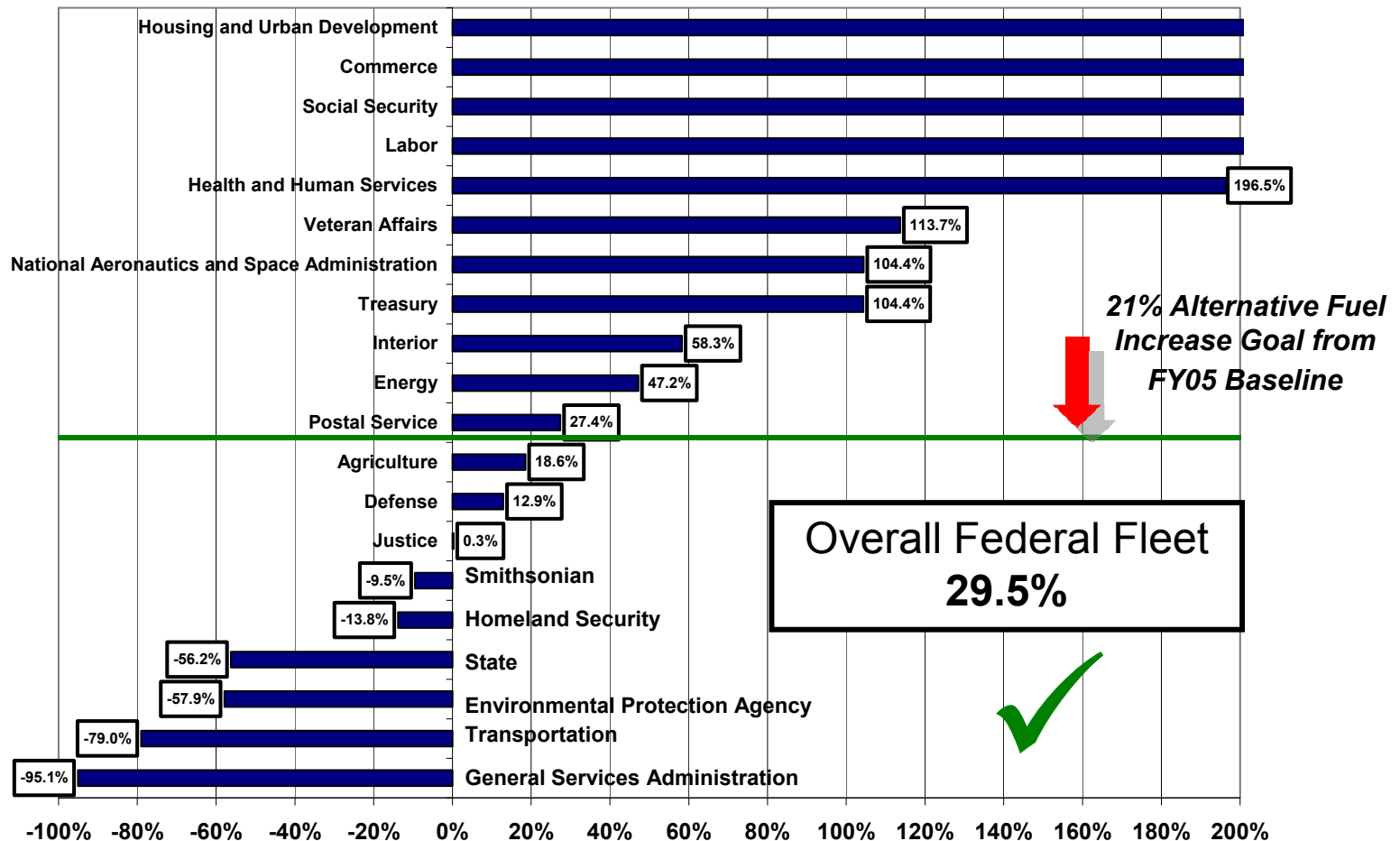


# E.O. 13423 Petroleum Reduction (FY07)\*



\*In covered Federal agencies; preliminary data

# E.O. 13423 Alternative Fuel Use (FY07)\*



\*In covered Federal agencies; preliminary data

# Understanding the Challenge

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Annually, each fleet is mandated to:

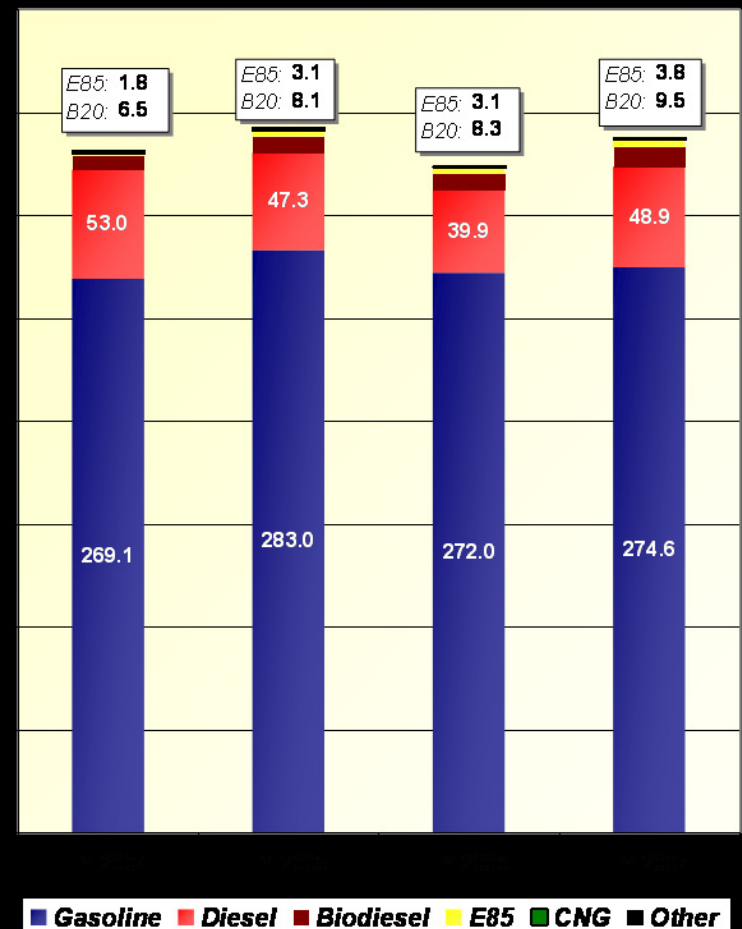
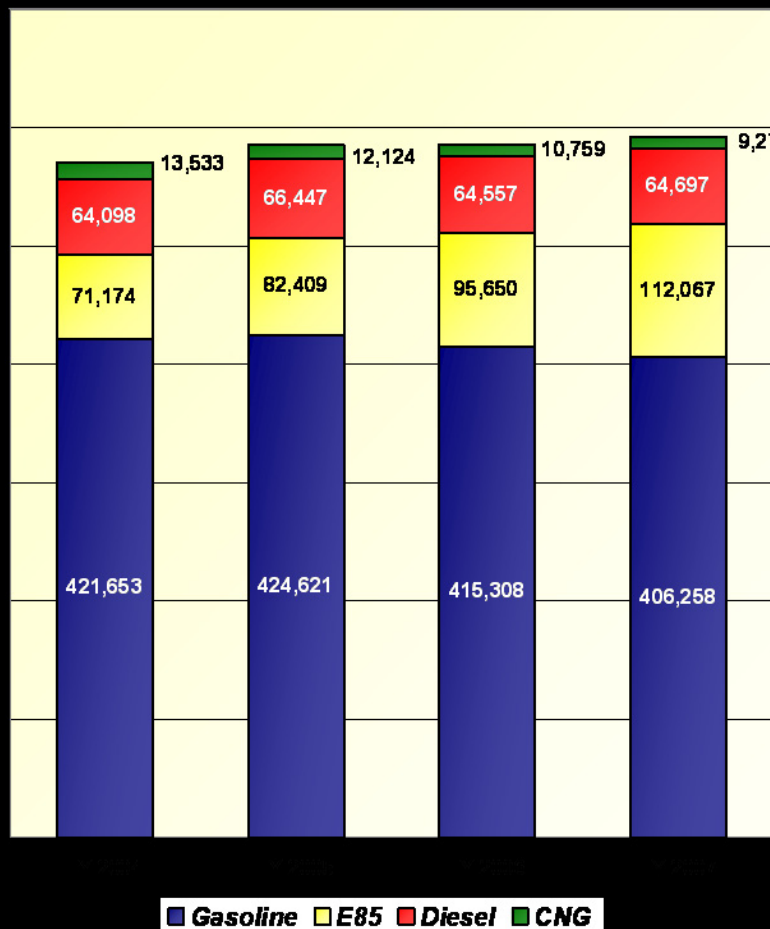
- Reduce total petroleum consumption by 2%
- Increase alternative fuel consumption by 10% (cumulative)

**But how? *By implementing a comprehensive fleet-specific petroleum reduction strategy that includes the following elements:***

- Buying vehicles capable of using alternative fuels
- Building new alternative fuel infrastructure
- Ensuring AFVs and diesel vehicles use available infrastructure
- Buying hybrid vehicles
- Right-sizing the fleet
- Increasing fuel economy of fleet
- Fleet efficiencies (e.g., reducing vehicle miles traveled)

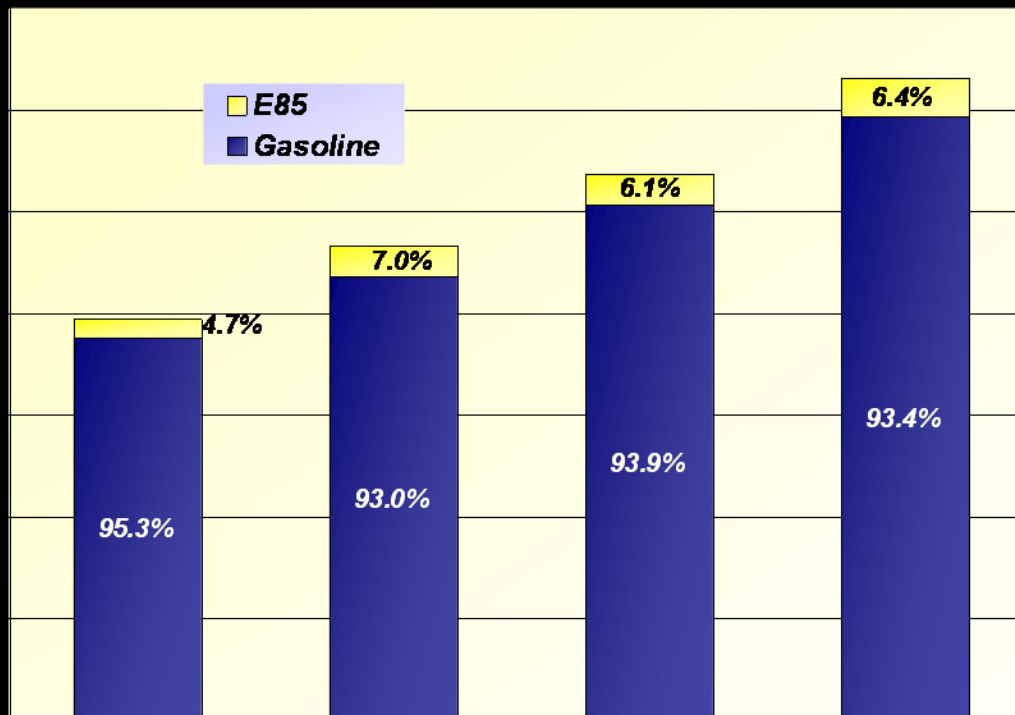
There are **121,778 AFVs** in the Federal Fleet (**21% of all FY07 vehicles**)

Alternative fuel use is small (**7,025,521 GGE** or **2.6% of fuel use in FY07**)



# Low Use of E85 in Federal FFVs

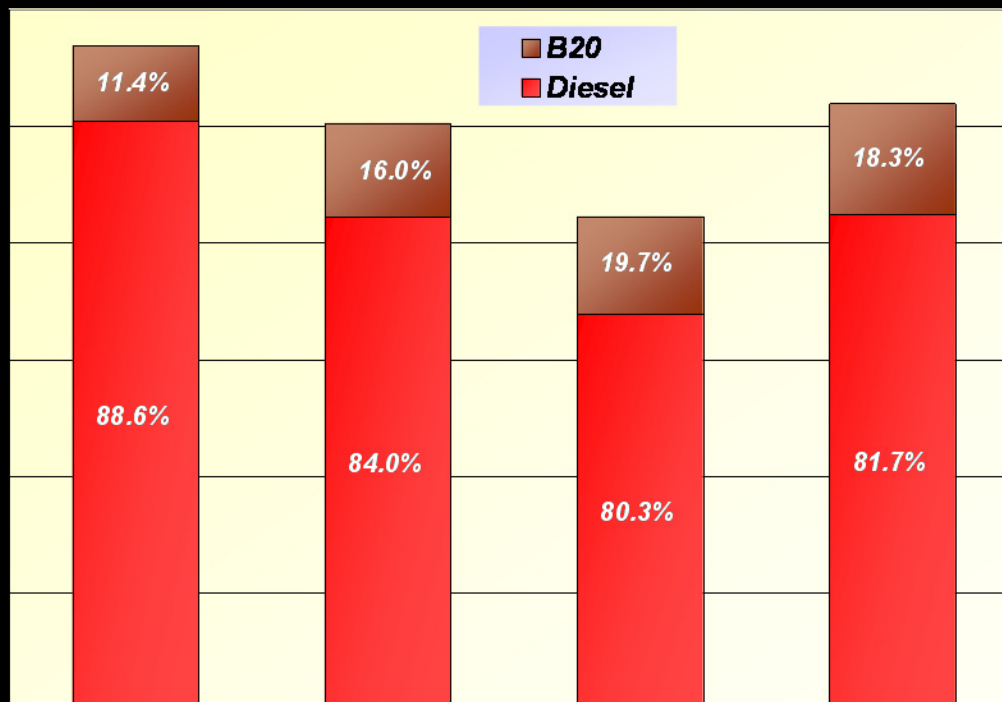
(6.4% in FY07)



Lack of commercial infrastructure  
Lack of E85 pumps at Federal Fueling Centers  
Limited use of existing infrastructure

# Higher use of B20 in Federal Diesel Vehicles

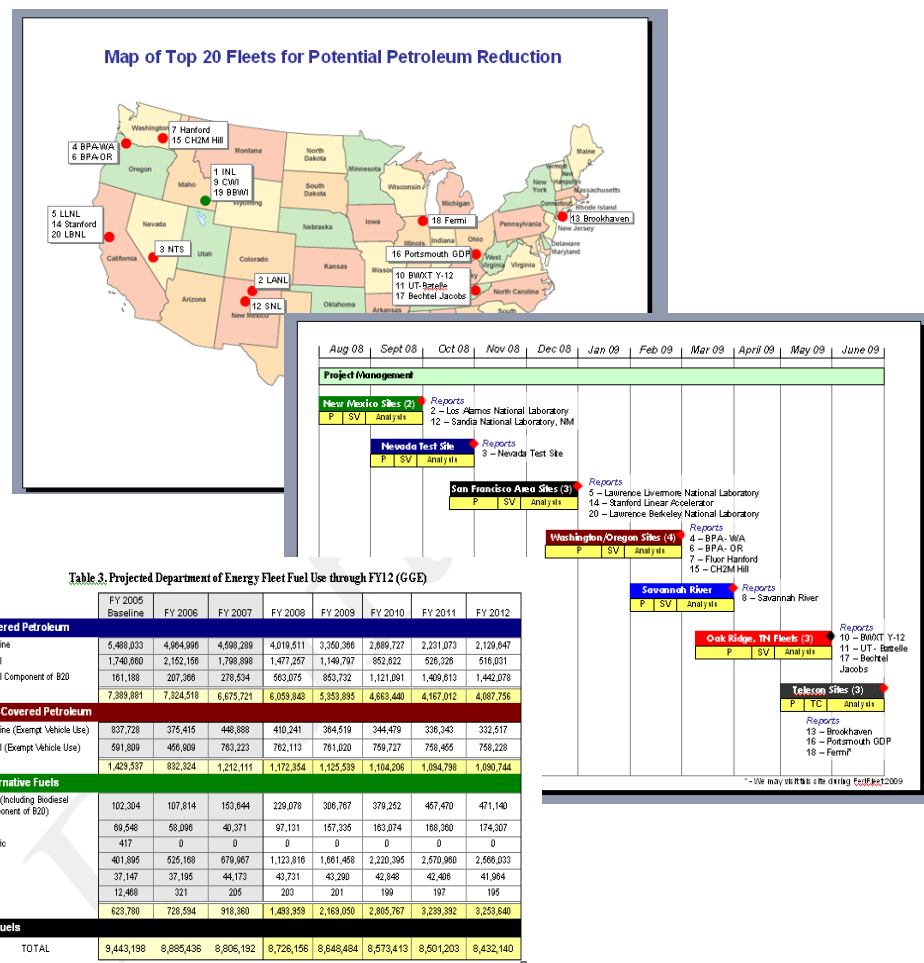
*(but still low—18.3% in FY07)*



High DOD use  
(Marines and Air  
Force) and USPS  
More B20 use at  
Federal Fueling  
Centers  
Lack of commercial  
infrastructure  
Limited use of  
existing  
infrastructure

# DOE's TEAM Initiative

- Focus on top 20 DOE sites
- Objective is to exceed EPACT and E.O. 13423 requirements
- Strategy for cutting petroleum use in DOE fleets 2.4M GGE (36%) by FY12



# TEAM Strategy Elements

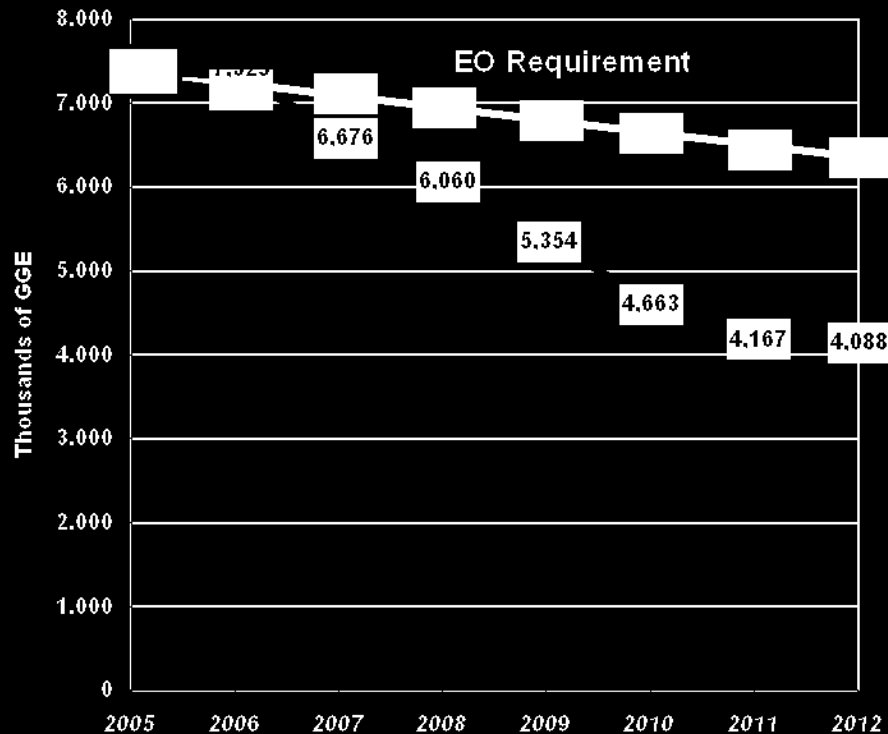
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1. Acquire AFVs and use alternative fuel
2. Use biodiesel blends
3. Acquire hybrids
4. Implement fleet efficiency measures



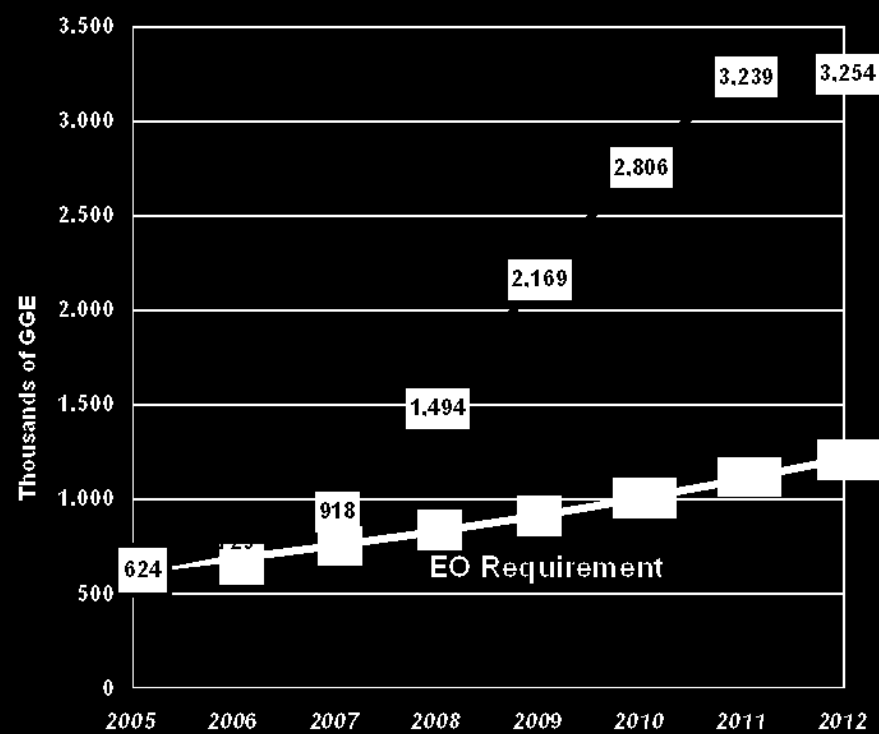
## Projected Covered Petroleum Compliance

This strategy will reduce covered petroleum use by 39 %



## Projected Alternative Fuel Compliance

And increase alternative fuel use by 254% compared to use in FY 2007



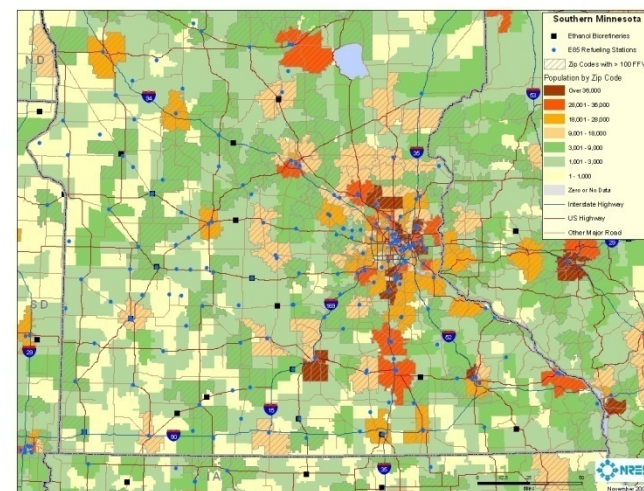
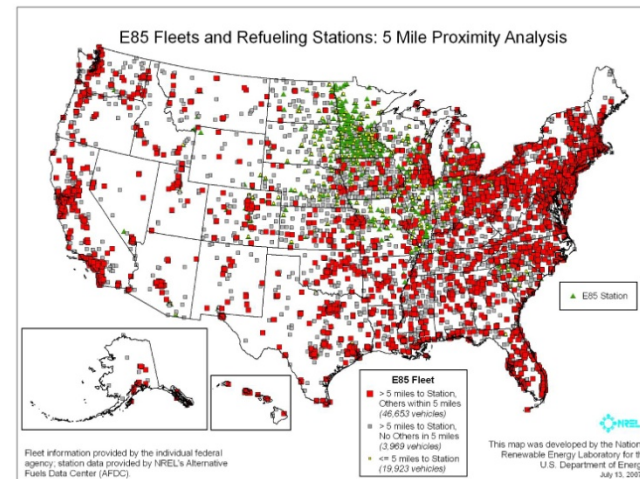
# Expanding Alternative Fuel Infrastructure

DOE held “Industry Day” on June 12, bringing together Federal fleets and fuel providers

DOE analyzed location information on AFVs lacking infrastructure

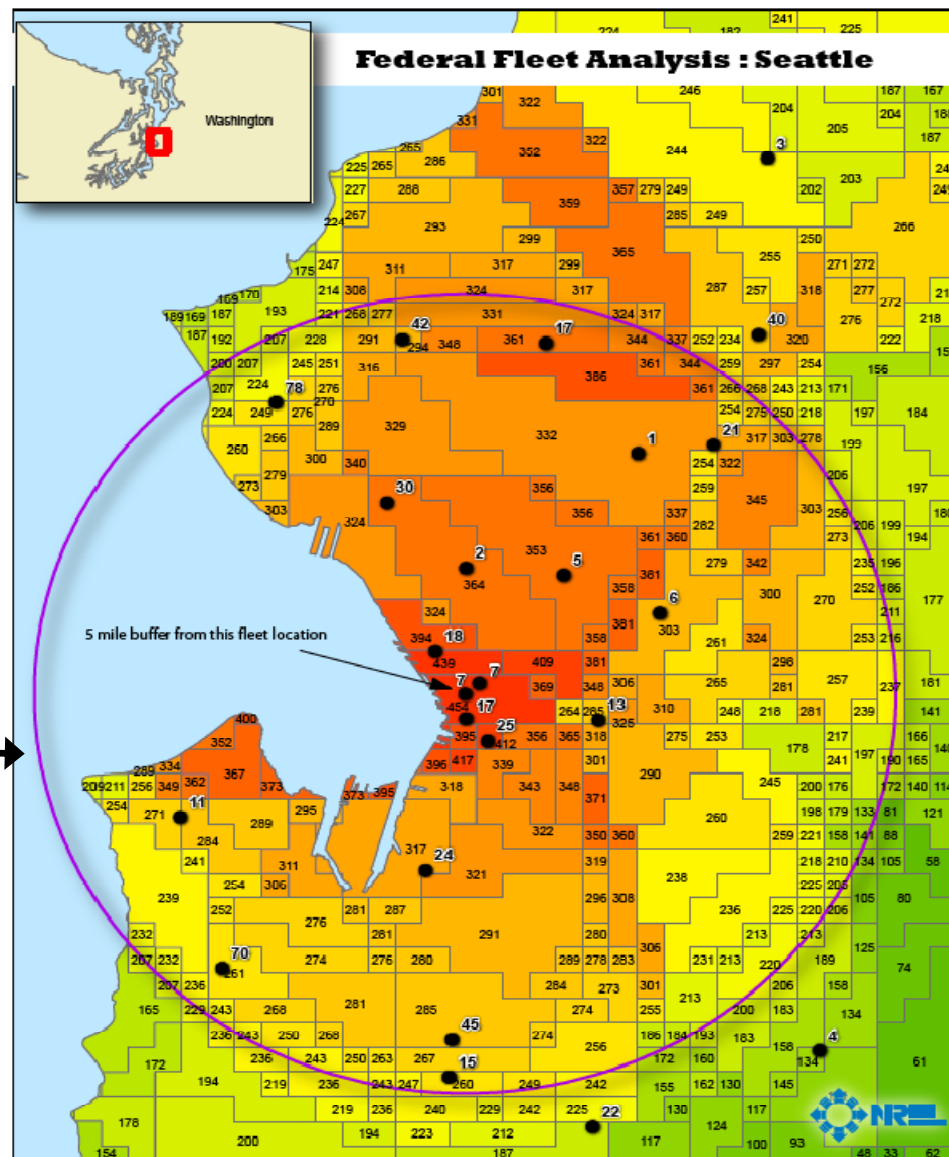
Fuel providers have approached DOE eager to supply these fleets

Opened dialog for evaluating contract and other mechanisms for making AF available to fleets

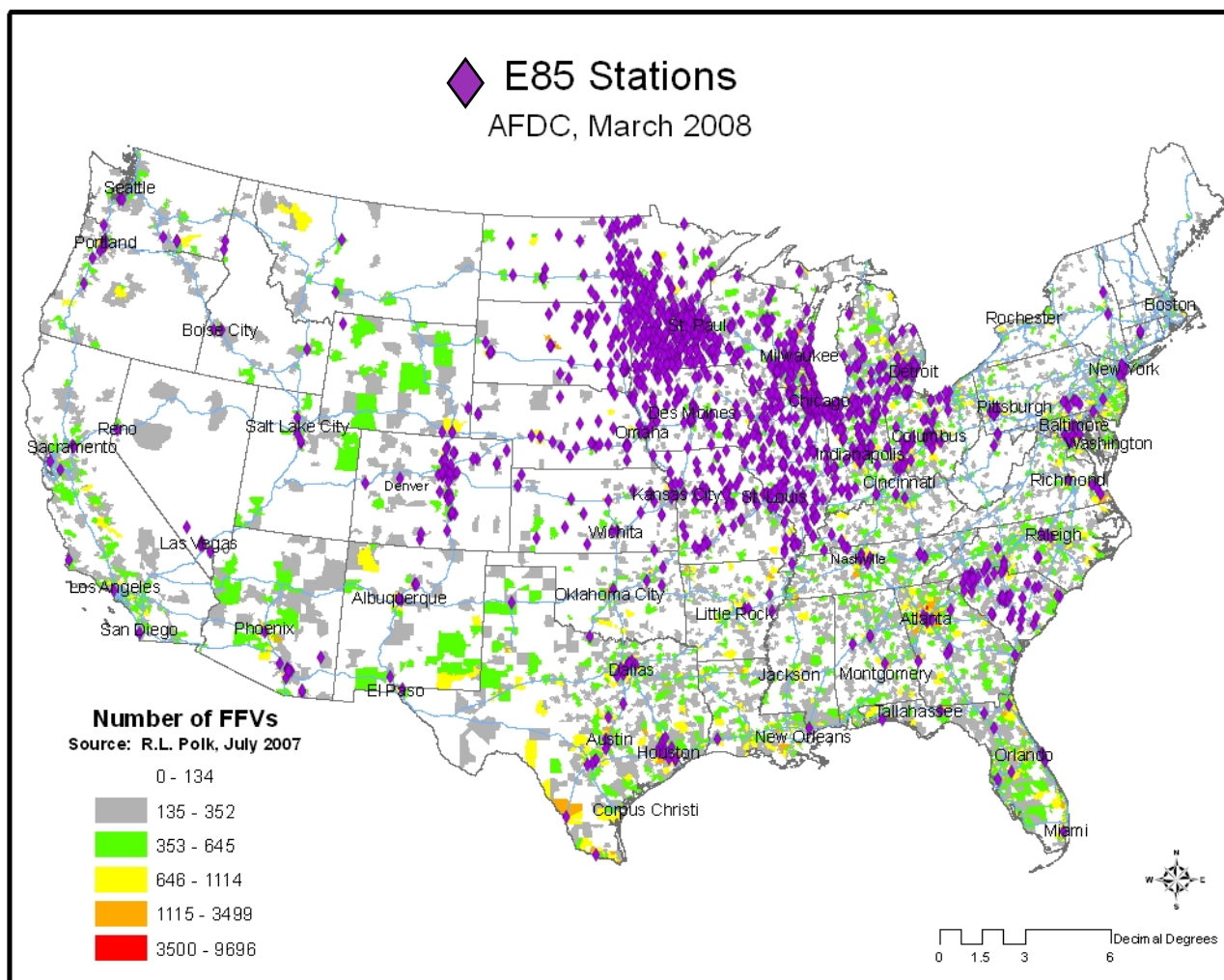


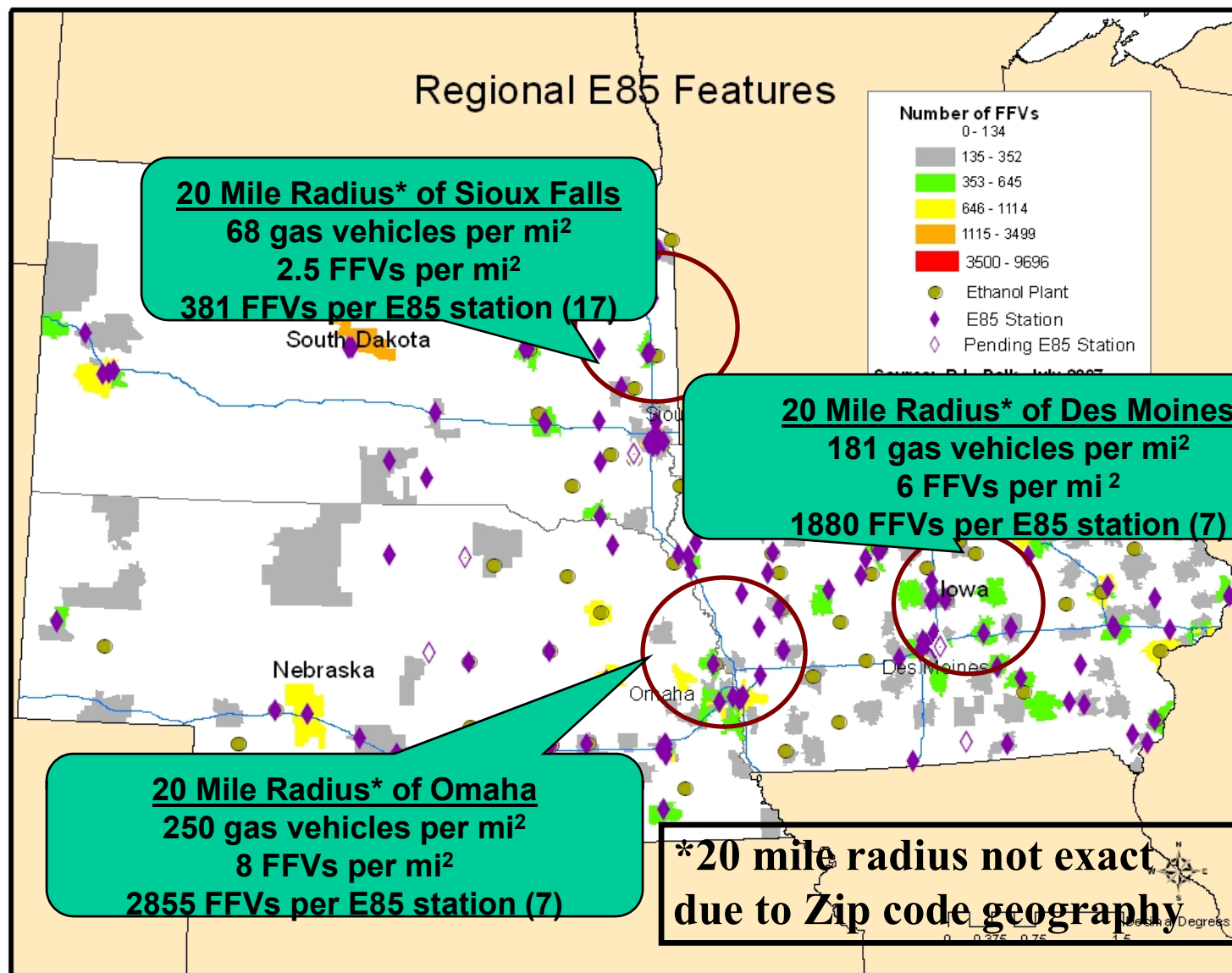
## Proximity of Federal fleet FFVs to hypothetical E85 station

14 of 21 Federal agencies garage vehicles within this 5 mile radius



# Public Sector Potential







## Summary of status

- DOE now knows where the waived Federal AFVs are located (about 70,000 FFVs) – intent is to release this location data shortly
- NREL has identified “hot spots” of opportunity for infrastructure – will conduct further detailed GIS analyses
- NREL has location dataset of DMV-registered AFVs
- DOE has initiated dialog with industry and Federal fleet representatives; established working group



# Opportunities for collaboration

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Feds and Clean Cities Coalitions (CCCs) are a natural partnership

- Common goals of increased alternative fuel use and infrastructure

Feds can assist CCCs:

- Provide high density Federal fleet location data to CCCs
- \$ (?)
- Guarantee alternative fuel use via long-term contracts

CCCs can assist Feds:

- Identify other fleets in the local area that could use AF
- Act as liaison between fuel providers and fleets
- Participate in working group

# QUESTIONS?

**michael\_helwig@nrel.gov**

**303-275-4426**